Annual Report

Advisory Committee on Heavy Oil and Oil Sands Development

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Advisory Committee on Heavy Oil and Oil Sands Development

Alberta
ENERGY

Office of the Minister

Legislature Building, Edmonton, Alberta, Canada T5K 2B6 403/427-3740

December 31, 1988

To Her Honor
Helen Hunley
Lieutenant-Governor
Province of Alberta

Madam:

I have the honor to transmit the 1988 Annual Report of the Advisory Committee on Heavy Oil and Oil Sands Development.

Respectfully submitted,

Neil Webber

Neil Webber
Minister of Energy

LEGISLATIVE ASSEMBLY
ALBERTA

December 31, 1988
To the Honourable Neil Webber
Minister of Energy

Sir:

I have the honor to transmit the 1988 Annual Report of the Advisory Committee on Heavy Oil and Oil Sands Development.

Respectfully submitted,

Bill Payne

W.E. (Bill) Payne, MLA
Chairman

Statement of Chairman

Meetings held in 1987 with community leaders in those regions affected by heavy oil and oil sands development revealed a growing appreciation for the impacts of industrial growth on local community infrastructure with attendant concern regarding municipal financing and social problems. Considerable interest was expressed in the sharing of municipal tax revenues as a means of ameliorating local community impacts.

As a result of these interests, administrative responsibility for the Committee's continued operation was transferred from the Department of Forestry Lands and Wildlife to the Department of Municipal Affairs with the transition taking place in January 1988. The Honourable Dennis L. Anderson, Minister of Municipal Affairs, appointed Mr. Jack Thomas, Assistant Deputy Minister, Planning Services Division, to serve as Vice-chairman of the Committee replacing Mr. Les Cooke who had moved on to become Assistant Deputy Minister of the Fish and Wildlife Division. The Minister also appointed Dr. Graham Power, Director, Research and Development Branch in the Planning Services Division of Alberta Municipal Affairs, to serve as Executive Director of the Committee. Mr. Lanny Coulson, Resource Planner of Forestry Lands and Wildlife, had previously served the Committee in this capacity. I would like to thank Mr. Cooke and Mr. Coulson for their valued service in the past to the Committee.

During 1988 the Committee has contributed to the analysis of community impact of heavy oil projects in the Cold Lake, Grande Centre, Bonnyville area. Specifically, industry data were collected for projects planned or initiated in the area which will create population growth in the affected communities. By utilizing the Municipal Affairs Impact Model, the incremental demand on municipal services can be estimated as well as providing a measure of the effect on local taxes. We anticipate this tool will prove useful in guiding discussions between communities and industry to best plan for and mitigate difficulties as future development takes place.

Again in 1988 the price of crude oil has dictated the pace of new heavy oil and oil sands projects. During the early part of the year a relatively stable price prevailed and a significant number of projects were planned in the Peace River, Athabasca and Cold Lake — Lloydminster areas. As the price sagged away during the latter half of the year, most of these projects were delayed. The industry has adopted a "wait and see" attitude tempered by anticipation the recent OPEC agreement will hold. If it does result in higher, stable prices we anticipate an increase in field development later in 1989.

The Advisory Committee has now completed its fifth year of operations. The final section of this report summarizes our meetings and travel during the year.

Finally, I would like to commend the various government departments that have reacted so promptly to our comments and recommendations regarding those communities affected by heavy oil and oil sands development.

Bill Payne, MLA
Chairman

Role of the Committee

The Advisory Committee on Heavy Oil and Oil Sands Development was established by the Department of Energy and Natural Resources Amendment Act, 1983, and re-confirmed by the Department of Energy Act, 1986. The first meeting was held on July 4, 1983.

The mandate of the Advisory Committee was to continue until December 31, 1987. On April 15, 1987, however, the Lieutenant Governor in Council ordered the continuance of the Advisory Committee for an additional three years until December 31, 1990 (Order in Council 245/87).

The Advisory Committee was formed in recognition of the impact on communities by intense and accelerated growth from heavy oil and oil sands development. It monitors such growth and acts as a facilitator to bring to the attention of those government departments providing services to those areas impacted by heavy oil and oil sands developments, items of mutual interest.

The Committee, too, plays a role in learning, first-hand, the concerns raised by communities in coping with the often-times uncertain development of heavy oil. Face to face dialogue with local community representatives allows the Advisory Committee to act in a manner rarely seen in today's fast paced economy, that is, personal communication and the ability to put a face to a name.

In general, the Committee encourages and facilitates continuing communications among the organizations engaged in developing the heavy oil and oil sands resources, the residents of communities of Alberta directly affected by that development, and the various provincial government departments and agencies concerned with the regulation of that development.

Committee Membership

The legislation that established the Advisory Committee on Heavy Oil and Oil Sands Development also prescribes its membership to ensure balanced representation.

The Chairman is a Member of the Legislative Assembly of Alberta and the Vice-chairman is a senior official of Alberta Municipal Affairs. Three members are appointed to represent residents of heavy oil and oil sands areas. Industry and the Energy Resources Conservation Board (ERCB) are also represented.

The Committee members bring to the committee's work a great deal of experience, expertise and insight pertinent to the physical and socio-economic impacts of heavy oil and oil sands resource development in Alberta.

Members of the Advisory Committee on Heavy Oil and Oil Sands Development:

Seated (left to right) Dick Aberg, Industry; Bill Payne, MLA – Chairman;
Jack Thomas, Alberta Municipal Affairs, Vice-Chairman;

Standing (left to right) Robin Vogelesang, Acting Executive Director; Bill Slawuta, Bonnyville;
Ralph Evans, Energy Resources Conservation Board; Don McGladdery, Fort McMurray;
Neil Gilliat, Slave Lake.

Resources and Development

The oil sands and heavy oil operators continued to contend with unstable markets and low oil prices during 1988. Some early activity occurred only to be curtailed or postponed toward the latter part of the year.

In the Athabasca Oil Sands Area the Syncrude Group received approval for the $3.9 billion expansion of its mining, extraction and upgrading project at Mildred Lake. The approval was issued by the ERCB without a major public hearing due to the efforts of the Syncrude Expansion Review Group, consisting of Syncrude Canada Ltd., Energy Resources Conservation Board (ERCB), Alberta Environment (A.Env.) Forestry, Lands and Wildlife (FLW) and the Fort McKay Community, and their recommendation for approval.

Suncor Inc. Resources Group (Suncor) applied in August for debottlenecking of its Mildred Lake extraction and upgrading plants to allow 3 000 m^3/d of additional synthetic crude to be produced. In December, however, Suncor announced capital spending on the project would be slowed down immediately because of low and volatile crude oil prices. Some engineering studies would continue so the project is ready to re-start when cash flow improves. Review of this application is in progress by the Suncor DART (Suncor Debottlenecking Application Review Team), made up of Suncor, ERCB, A.Env., FLW, City of Fort McMurray, Community and Occupational Health and the Fort McKay Community.

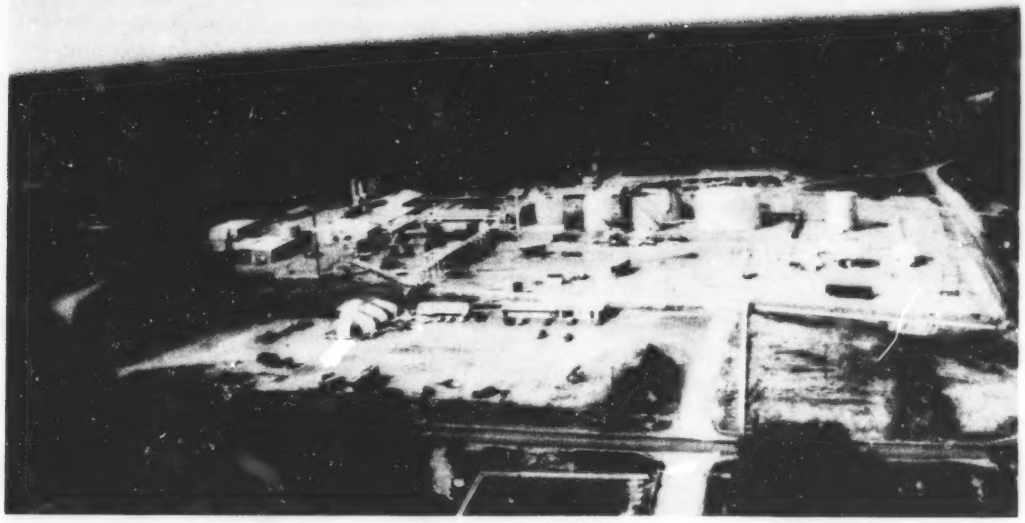
The OSLO Group (Other Six Lease Operations) announced plans for a $4.2 billion mining-extraction-upgrading plant at Kearl Lake. Preliminary disclosure is expected soon and formal application is proposed for early 1990. The OSLO group tested the dredging concept of removing overburden during 1988 and are planning further tests in 1989 for possible inclusion in their mining operations. A review team is also being planned to handle the examination of this project.

C-H Synfuels received approval for a dredging and extraction test of oil sands just outside Fort McMurray on the Horse River. A community advisory committee was established to keep the local community advised of activity and to provide a mechanism for concerns to be addressed. The first meeting of the advisory group occurred in late 1988.

The AOSTRA operated underground test facility continued experiments at the shaft and tunnel site. Horizontal wells drilled from the tunnel are testing the HAS Drive (Heated Annulus Steam Drive) concept with encouraging production results during the initial phases in 1988.

In the Cold Lake Area BP/Petro-Canada received approval to merge the Marguerite Lake experimental scheme with the Wolf Lake Commercial Scheme and implement an in situ combustion demonstration at one of the 20 well satellites. Construction of the expanded production facilities for Wolf Lake III, approved in 1987, was over 70 per cent complete by year-end.

Esso received approval for modification to the location and development plans for Phases 7 to 10 of their Cold Lake Production Project. Construction at the new plant facilities for



Phases 7 and 8 were over 70 per cent complete when suspension of further field activities was announced in late November. Esso also made application for a coal combustion test at the CLPP site utilizing the Low NO_x/SO_x burner technology being developed by TransAlta.

Suncor received approval for amendments to the Burnt Lake Commercial In Situ Project and commenced drilling and construction activities on the project which had been on hold since approval in 1986. In December, however, Suncor announced an immediate slow-down of the development and indicated that until crude prices are much higher for a considerable period of time, the project would not proceed. A decision on whether to proceed or defer would be made in 1989. Suncor and its 50 percent partner, Triton Resources, also decided to permanently suspend operations at the experimental Fort Kent Project.

During the year, Murphy Oil also announced suspension of its in situ recovery activity at the Lindbergh commercial operation as did Canadian Occidental at its Manatokan experimental scheme, both citing the low and uncertain price available for crude bitumen production.

In the Peace River Area, Shell Canada received approval for an additional 40 000 barrels per day at the Cadotte Lake Scheme. The second phase of the Peace River Expansion Project (PREP II) calls for an initial capital investment of $570 million to bring production to a total of 50 000 barrels per day. The approval requires construction to be started prior to the end of 1990. A planned commencement of construction during 1989 was put on hold by Shell late in 1988.

In the oil sands areas in 1988, there were 11 approved commercial schemes with all except the Dome Primrose project being active to some degree. Experimental projects totalled 31 with one testing mining related recoveries and the remaining thermal in situ techniques.

In the heavy oil areas, there were 11 active thermal schemes and 11 schemes utilizing various chemical displacement methods. These along with the numerous conventional production operations were relatively unchanged from 1987.

Alberta Oil Sands and Heavy Oil Areas
Active Thermal Projects

PROJECTS

Athabasca

- * 1. Syncrude Mildred Lake
- * 2. Suncor Mildred Lake
- 3. AOSTRA McKay
- 4. OSLO Ft. McMurray
- 5. Canterra Kearl Lake
- 6. B.P. Tar River
- 7. Amoco Gregoire Lake
- 8. Unocal McLean (2)
- 9. Gulf Pelican (2)
- 10. Amoco Brintnell
- 11. Petro Can Hangingstone
- 12. AEC Ipiatik Lake

Peace River

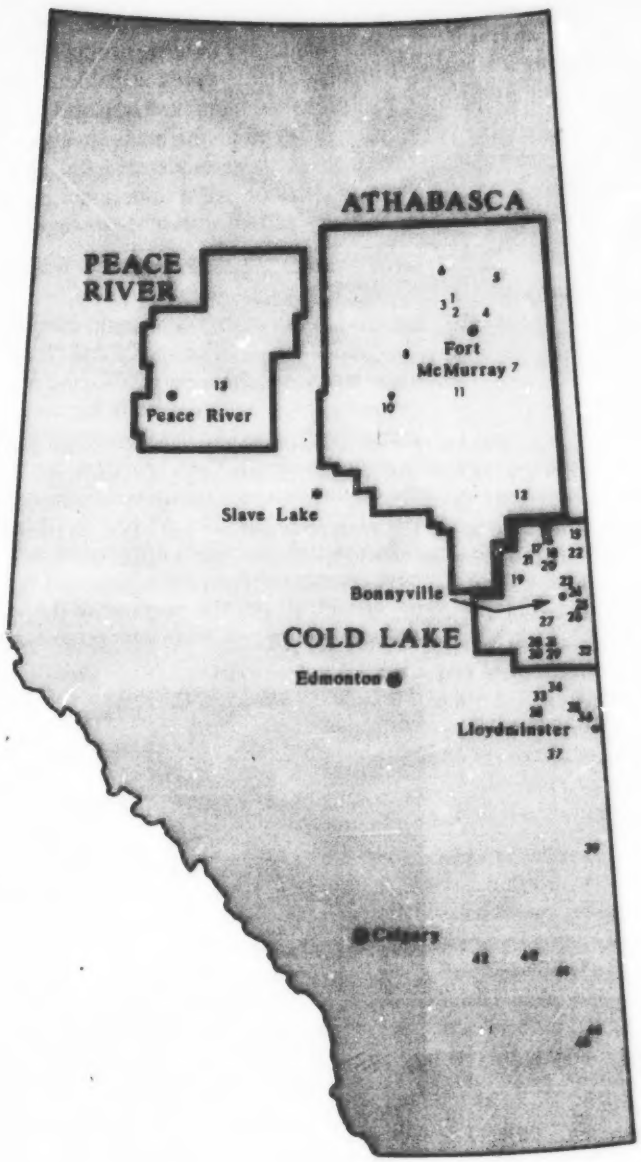
- *13. Shell Cadotte Lake

Cold Lake

- 14. Husky Fisher Creek
- *15. Suncor Burnt Lake
- *16. Dome Primrose
- *17. B.P. Wolf Lake (3)
- *18. Esso Cold Lake (3)
- 19. Canoxy Manitokan
- 20. Husky Tucker Lake
- 21. Mobil Wolf Lake (2)
- 22. Bow Valley Marie Lake
- 23. Excel Ardmore
- 24. Koch Fort Kent
- 25. Suncor Fort Kent
- 26. Amoco Beaverdam (2)
- *27. Murphy Lindbergh (2)
- *28. Amoco Lindbergh
- *29. Pan Canadian Lindbergh
- 30. Westmin Lindbergh (3)
- *31. Dome Lindbergh
- 32. Mazzie Frog Lake

Heavy Oil

- 33. Canoxy Morgan
- 34. Murphy Morgan
- 35. Home Lloydminster
- 36. Mobil Kitscoty
- 37. Can N.W. Wildmere
- 38. Dome Morgan
- 39. Norcen Provost
- 40. Can N.W. Atlee-Buffalo
- 41. AEC Suffield
- 42. PanCanadian Countess
- 43. EOR Medicine Hat
- 44. Pan Canadian Medicine Hat



* Commercial Projects

Committee Activities and Operations

The main focus of the Advisory Committee's activities in 1988 was to act as a forum for dialogue between government, industry and communities. While the committee did not visit as many communities as it has in past years, the meetings did once again point to the importance of information dissemination.

Activity in the oil patch generally was low with many projects being either downsized or put on hold temporarily. As a result, the Advisory Committee took advantage of this "breathing room" to concentrate on developing a program that would assist municipalities in preparing for the impacts associated with heavy oil projects. The Committee encouraged the application of a computer model called IMPACT, developed by Alberta Municipal Affairs, which examines the possible impact of new growth resulting from heavy oil activity on municipalities. The purpose of the examination, which links new employment with municipal planning and financial data, was to test the sensitivity of municipalities to new growth. Although the report is still in draft form, it is hoped that in 1989 it will serve as a useful tool to municipalities impacted by proposed heavy oil projects.

The Advisory Committee underwent some administrative changes during 1988 which saw the vice-chairman and executive director's positions shift from Alberta Forestry, Lands and Wildlife to Alberta Municipal Affairs. It was felt that with the renewed mandate of the Committee, the administrative function could be better served by Municipal Affairs, particularly in view of the fact that much of the focus of the Committee has been in dealing with individual communities.

In April a joint meeting was held between the Advisory Committee and the Interdepartmental Liaison Committee. As was the case in previous years, this meeting once again allowed for free-flowing discussion among

government departments as to their respective roles in the development of heavy oil and oil sands projects.

The Advisory Committee convened a number of meetings in the Slave Lake-Wabasca area. During its two day visit in June, the Advisory Committee met with a number of groups and individuals including the Town of Slave Lake Council, Improvement District 17 officials, representatives from Forestry, Peace Arch project, Community Vocational Centre, Community Futures Committee and members of the Bigstone Indian Band and I.D. Advisory Council.

Discussions held during the various meetings focused on two main issues — transportation and employment. Transportation related concerns centered around the upgrading and paving of highways in the Slave Lake-Wabasca area. Of particular interest was the scheduling of highway completion from Wabasca south through Calling Lake. The Advisory Committee communicated those concerns to Alberta Transportation and Utilities who provided a schedule of tentative completion dates for the highways in question. The second issue, employment, largely dealt with the lack of a local employment office in Wabasca and the question of native employment in the heavy oil and forestry projects. This concern too was communicated to the appropriate department, namely Alberta Career Development and Employment.

The last half of 1988 saw the Advisory Committee hold three regular business meetings in Edmonton. A common theme discussed by the Advisory Committee during

all three meetings was a significant announcement relative to Heavy Oil projects — the Lloydminster Husky Upgrader facility. Members of the Committee met with senior officials from Husky in order to gain some insight on the specifics of the upgrader project and its impact on the City of Lloydminster. The Advisory Committee decided that the timing was appropriate for a visit to Lloydminster in the very near future. As a result, a meeting was convened with City of Lloydminster senior officials in late January, 1989 to discuss the "state of readiness" of Lloydminster to absorb the anticipated growth from the Husky project.

In summary, the Advisory Committee completed another successful year of operation. Despite reduced heavy oil activity, the opportunities for increased communication among all affected parties allowed the Committee to prepare itself for an increasing liaison role in the accommodation of heavy oil projects, oil sands and related activities in the years to come.

Summary of Committee Meetings and Travel

January 13, 1988 — Edmonton
The first regular business meeting of 1988 saw the Committee finalize the preparation of the 1987 Annual Report. In addition, the members discussed at length the work plan for the upcoming year, including tentative visits to various communities.

March 9, 1988 — Edmonton
During this regular business meeting, the Committee witnessed the formal transfer of the Vice-Chairman and Executive Director positions from Alberta Forestry, Lands and Wildlife to Alberta Municipal Affairs. The 1987 Annual Report was approved for release. A presentation by a representative of the Alberta Chamber of Resources on the regional heavy oil upgrader concept completed the meeting.

April 25 and 26, 1988 — Edmonton
The April 25 meeting dealt with regular business matters including discussions on the upcoming trip to Wabasca/Slave Lake, Municipal Affairs' Heavy Oil Impact Study and the agenda for the April 26 Interdepartmental Liaison Committee. The Committee met with the Interdepartmental Liaison Committee, represented by 11 provincial government department senior officials. The topic dealt with an update from each department as to its work program and major issues/studies.

May 16, 1988 — Edmonton
The Committee held its regular business meeting in Edmonton at which time a number of items were discussed. These included final arrangements for the Wabasca/Slave Lake trip, an update on the IMPACT study and an information package on the "4th International UNITAR Conference on Heavy Crude & Tar Sands" scheduled for Edmonton, August 7 - 12, 1988.

June 21 and 22, 1988 — Slave Lake and Wabasca
The Advisory Committee met in Slave Lake and Wabasca. A meeting was held with representatives of the Town of Slave Lake and Improvement District 17 representatives. The second day was spent conducting a meeting with representatives of the Slave Lake Forest Area, Peace Arch Project, Community Vocational Centre and Community Futures Committee. Later that day the Committee travelled to Wabasca to meet with the I.D. Advisory Council and the Bigstone Indian band. Topics at the meeting primarily included transportation and employment.

September 13, 1988 — Edmonton
The fall meeting was once again held in Edmonton during which the Committee dealt with items ranging from the implications of the Husky Upgrader on Lloydminster to a review of upcoming community visits by the Committee. It was decided that a meeting with senior officials from Husky Oil would be in order at an early date.

October 17, 1988 — Edmonton
The Advisory Committee was briefed by a sub-committee on a meeting held with Husky Oil officials earlier this month concerning the Husky upgrader in Lloydminster.

Following this, the Committee dealt with a variety of items including transportation related concerns in Wabasca, issues facing Fort McMurray and finally a presentation by Alberta Career Development and Employment on "Projected Construction and Operational Workforce Requirements for New Major Oil and Forestry Projects in Alberta — 1988-1993."

December 5, 1988 — Edmonton
The last meeting of 1988 saw the Advisory Committee deal with transportation matters concerning the status of Secondary Road 813 from Wabasca to Calling Lake and the paving of Highway 963 from Syncrude turnoff to Fort McKay. Other items included a discussion on the planned visit to Lloydminster in 1989, a general discussion on upcoming meetings and finally preparations for the 1988 Annual Report.